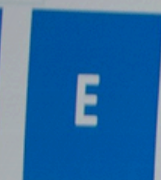
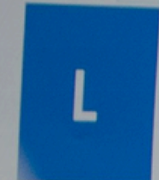


# 2024



- Surrounded by five wildlife sanctuaries, with Keo Siena being the closest.
- The Ou Te River flows through Pu Ngaol, spanned by a narrow suspension bridge.
- Water scarcity is a pressing issue; residents travel four hours every three days to the Mekong River for clean water



Health and Safety

Uses natural resources and minimises waste

Give to community

Pure (6.5-8.5)

# 20 years *of* impact



# Engineers will play a pivotal role in designing the solutions we need for humanity and the planet to thrive.

Achieving this demands a rapid shift towards globally responsible approaches, requiring a complete reimagining of engineering education and industry practices.

At Engineers Without Borders UK, we empower individuals, teams, and organisations with the skills and expertise needed to drive this urgent change. Together, we are transforming engineering to create a safe and just future for all.



## A message from our Chief Executive Officer

What a great 20th anniversary year! It's been wonderful to reflect on just how far we've come since 2004 and to bring together so many of those who have driven our work forward over two decades with such energy, passion and commitment. It reminds us that our achievements rely on the dedication and support of many volunteers, Chapter members, trustees, staff, partners and collaborators. All united by a shared goal: putting global responsibility at the heart of engineering.

Our design challenges continue to grow and inspire. In 2024, we facilitated learning for more than 30,000 people across 21 countries, taking us past a major milestone - over 100,000 have participated in our challenges. We also published an **independently written report** highlighting the impact of our flagship Engineering for People Design Challenge.

The fundamental shifts we aim for require us to go beyond modular programmes, to drive systemic change. In March, our Systems Change Lab, delivered in partnership with the Royal Academy of Engineering, led to the launch of the **Reimagined Degree Map**. The voices of our student membership were a key inspiration and driving force for this work, and we're already working with universities to help them use the Map to truly embed global responsibility into curricula.

As we look to 2025, we are excited to build on this momentum with bold new initiatives to advance our mission. You can read more about these plans in this Annual Review - and we look forward to working with you to make them a reality.

A handwritten signature in blue ink that reads "John Kraus". The signature is fluid and cursive.

**John Kraus,**  
Chief Executive Officer



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2001



### The start of a movement

Engineers Without Borders launched when a group of engineers gave their time and their skills to help people in Ethiopia during the famine of the early 1980s.

In 2001, a group of students at University of Cambridge were inspired by one of the founders of Engineers Without Borders Canada, and set up the organisation in the UK.

Hear from founding member, Tom Newby, about the start of the UK movement.

2006



### A shift in gears

Engineers Without Borders UK became a registered company and charity in 2004, but the big shift came in 2006 when we went from being a group of volunteers to having permanent professional staff.

Hear from former Chief Executive, Andrew Lamb, about this important shift in gears.

2008



### Our global impact

From 2004-2019, we provided the opportunity to deliver pro-bono engineering support around the world, increasing access to clean water, improved sanitation facilities, reliable energy resources and resilient built environments.

Hear from elected trustee, Milly Hennayake, about her experience participating in an Engineers Without Borders UK international placement.



# 20 years remembered

Over 20 years, we have inspired tens of thousands of people to put global responsibility at the heart of engineering practice.

Click on the images to hear from the inspiring individuals who have shaped our journey.



2011



### Launching the Engineering for People Design Challenge

In 2011, we began to make an impact on the UK's education system. Our award-winning Engineering for People Design Challenge prepares students, the engineers of the future, with the skills and insights needed for globally responsible engineering.

Get a taste of the programme.

2016



### Engineering change

In 2016, we launched our five year 'Engineering Change' strategy, which introduced globally responsible engineering and our intention to transform engineering so that it benefits everyone.

Hear from Emma Crichton, Innovation Director at Engineers Without Borders UK, about this important milestone.

2019



### Our global impact

In 2019, after delivering over 200,000 hours of pro-bono engineering we took the decision to end our international placements. They remain an important part of our history and the journey we went on to evolve into the movement we are today. But the number of people they've helped either directly, or indirectly, is relatively small compared to the size of the global challenges we face.

We took time to assess our work and realised that we can positively affect many more lives by using our influence and educational programmes to encourage change on a much larger and strategic scale. As such our focus has moved from running individual pro-bono projects to creating systemic change.

Our 2021-2030 strategy provides a strong, persuasive plan to put global responsibility at the heart of engineering, ensuring a safe and just future for all.



Today, Engineers Without Borders UK continues to grow in size, reach, impact and ambition. We are now focused on reaching the tipping point where global responsibility becomes integral to the way all engineering is taught and practised.

Hear from Chief Executive, John Kraus, about our current focus and his hopes for the future of the movement.

# 2024 highlights



## Driving systems change in education

Continuously improving engineering education requires imagination. Over 200 change makers participating in our 2023-24 Systems Change Lab, co-delivered with the Royal Academy of Engineering, shared a collective vision for an engineering curriculum that truly integrates global responsibility. **Explore the insights shared by the Lab.**

January

## Generating ideas for change

In the 2024 edition of our Reshaping Engineering design challenge, delivered in collaboration with architecture charity AzuKo, more innovative solutions were designed by teams based around the world. Guided by experts in globally responsible engineering, teams delved into the critical issues facing the sector and developed solutions aimed at ensuring engineers are equipped to address 21st century challenges. **Check out the winning solutions.**



February



## Launching a new tool for change

To support engineering departments to navigate the urgent decisions required to prepare students for 21st-century challenges, we launched a new interactive guide with the Royal Academy of Engineering: the Reimagined Degree Map. The guide walks teams through exercises to integrate global responsibility within any engineering degree, whether this be civil, mechanical or another discipline. **Explore the Map.**

March



## Celebrating 20 years of impact

In April, we kickstarted celebrations for our 20th Anniversary with an event bringing together the Engineers Without Borders movement to explore what it means to be an advocate in the sector. Alongside reflecting on the impact we have created, we launched a 12-month thought leadership campaign exploring the competencies of globally responsible engineering. **Take a look.**

April

## Connecting with our global movement

2024 has been a pivotal year for the global Engineers Without Borders movement, as we re-invigorate our international collaboration to maximise our impact. Beginning with a European summit in May, followed by an International summit in November, we are shaping collective action with over 30 Engineers Without Borders organisations. **Hear from Executive Director of EWB-International, Katie Cresswell-Maynard.**



May



## Empowering the next generation

June was a huge month for our award-winning Engineering for People Design Challenge, as we celebrated the 2023-24 UK & Ireland finalists at our Grand Finals event and launched our **new Impact Report**. With the support of hundreds of industry volunteers, the challenge brings to life real-world challenges shared by a community partner, and has now reached over 87,000 students across 47 universities in five countries. **Explore this year's winning solutions.**

June

# 2024 highlights



## Supporting a new vision for engineering

Through consultation with our communities, Engineers Without Borders UK and the Engineering Professors Council crafted a unified response to the proposed vision and principles of the National Engineering Policy Centre's Engineers 2030 project. The project is rethinking engineering and technology skills for a world in which both people and planet can thrive. **Explore our recommendations.**

July

## Shaping the future of global transport

In partnership with High Volume Transport Applied Research and UNESCO, we launched a new virtual design challenge fostering innovative thinking and practical solutions to enhance sustainable mobility for Low- and Middle-Income Countries. Throughout August, over 200 innovative minds from around the world worked together to help pave the way for a more sustainable, accessible future. **Take a peek at the winning solutions.**



August



## Creating policy for regenerative design

We continued to support Constructivist with the launch of the fourth edition of the Regenerative Design Lab, delivered with Chatham House Sustainability Accelerator. Kickstarting in September, the 6-month immersive programme is bringing together regenerative practitioners and policy professionals to explore how to create policy that delivers regenerative design. **Discover the programme.**

September



## Growing our student network

In October, student Chapter committee members from across the country came together for our annual Building Community Leaders event. Together, we explored ways to strengthen collaboration and laid out a bold vision for the year ahead. With 907 Chapter members and counting, led by 7 Student Champions, our growing student network continues to drive impact on university campuses and beyond. **Learn more about the Chapters.**

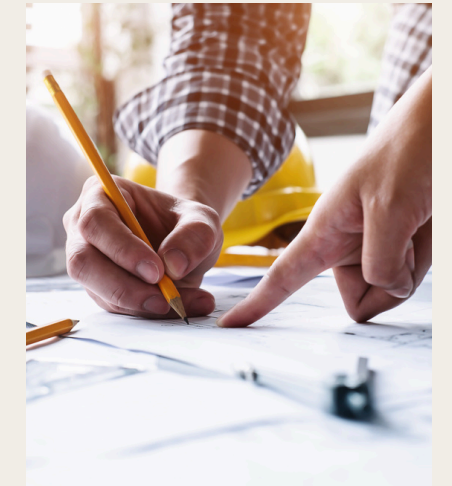
October

## Championing diverse voices

Our community came together in November for a special event exploring the power dynamics in engineering decision-making and strategies for empowering diverse voices. Expert panellists shared insights on inclusion, disability rights, and climate-focussed media in a powerful conversation that has been recorded for the Engineering Matters podcast.



November



## Launching new initiatives for 2025

As we look ahead to 2025, we have started work on three exciting initiatives to propel our mission forward by upskilling and mobilising individuals and businesses in globally responsible engineering. We welcome our network to join upcoming sessions that will test and refine the proposals. **Help shape our 2025 initiatives.**

December



**Over 30,000 people  
across 21 countries**  
participated in our design challenges in 2024\*



# Equipping tomorrow's engineers

Preparing tomorrow's engineers to tackle global challenges is central to our mission. Through educational programmes like the Engineering for People Design Challenge, Efficiency for Access Design Challenge, and our Global Responsibility virtual experience programme, we empower students to approach engineering with sustainability, ethics, and inclusion at the forefront. The following highlights showcase how these initiatives are inspiring the next generation of globally responsible engineers.

“

“Rewarding yet challenging in all the right ways.”

Student participant of the Engineering for People Design Challenge

“

“I learnt a lot about the responsibilities of an engineer and the role that we can play in the betterment of society.”

Student participant of the Engineering for People Design Challenge

## Engineering solutions with people in mind

Our flagship programme, the **Engineering for People Design Challenge**, brings to life real-world design challenges faced by local communities. Since its inception in 2011, the programme has reached over 87,000 students across 47 universities in five countries.

In the 2023/24 academic year, 13,500 students across Ireland, South Africa, the UK and the USA, came together to design solutions to address engineering challenges in Pu NgaoI, Cambodia.

The challenge culminated in the Grand Finals event, hosted in Manchester, where a team from University College Dublin took home first prize for their solar-powered water filtration system.

**Explore the winning solutions.**



of participants have broadened their understanding of global responsibility



of participants report that the Design Challenge contributed to their academic success



feel confident addressing the UN Sustainable Development Goals (SDGs) in their work



have increased their skills in team-working, decision-making and project management

**Discover the impact of the Engineering for People Design Challenge in our new Impact Report**



## Accelerating clean energy access

In 2023/24, we co-delivered the fifth instalment of the **Efficiency for Access Design Challenge**, a global, multi-disciplinary competition that empowers teams of university students to help accelerate clean energy access. This year's challenge reached 17 universities and over 175 participants across three continents. You can explore this year's designs on the open-source platform, **Crowdsolve**.

## Empowering learners worldwide

Our **virtual experience programme**, delivered via the Forage platform, continues to provide our international movement with a free opportunity to expand their understanding of globally responsible engineering. Since launching in 2020, over 14,000 individuals, predominantly based in the Global South, have enrolled on the programme.



Our **Global Responsibility virtual experience programme** has received a **4.51 rating from participants**

# Reimagining engineering education

Beyond our in-curriculum programmes, we are working to reimagine engineering education on a systemic level. By equipping educators and institutions with the tools to embed global responsibility at the heart of their degree programmes, we are helping to shape the future of engineering education in line with the needs of people and the planet. The following highlights illustrate how we've been driving this systemic transformation in 2024.

Our Systems Change Lab brought together:

**200+**  
change makers

**25**  
universities

**22**  
companies





“

We recognise [the Reimagined Degree Map] as a significant and valuable contribution to the advancement of engineering education, particularly in shaping the landscape of UK degrees and aligning with accreditation requirements.”

Institution of Mechanical Engineers

## Launching the Reimagined Degree Map

This year, we proudly launched the **Reimagined Degree Map**, an interactive guide designed to support engineering departments in preparing students for the complex challenges of the 21st century. Developed in response to in-depth conversations with hundreds of educators, students, professionals, deans, accrediting bodies, and professional engineering institutions, the Map empowers decision-makers with the tools to facilitate transformative change.

We are now exploring how to facilitate change using the Map with universities including Sheffield Hallam and Imperial College London.

The Map has received endorsements from the Engineering Council, Institution of Mechanical Engineers, Institute of Materials, Minerals and Mining and the International Council on Systems Engineering.



Discover the Reimagined Degree Map

## Exploring outputs from the Systems Change Lab

In partnership with the Royal Academy of Engineering, in 2023 we launched the Systems Change Lab to explore how to transform UK engineering degree programmes. Bringing together 200+ change makers from 25 universities and 22 companies, the Lab fostered collaboration and innovation through workshops running from September 2023 to March 2024.

The Lab has already contributed to the creation of key resources, including our Reimagined Degree Map and the Engineering Professors Council’s Sustainability Toolkit. **Explore insights from the Lab.**

## Contributions to research

In 2024, we continued to contribute expertise on what the future of engineering education could look like through thought leadership and collaborative research. Our insights were featured in the Engineering Professors Council’s Sustainability Toolkit, where we authored thought pieces on **facilitating constructive sustainability conversations** and **evidencing sustainability competencies in assessments**.

Additionally, we helped to map the **Engineering for One Planet Framework** to AHEP4, a vital resource for integrating 93 sustainability-focused learning outcomes into engineering curricula.



# Shaping globally responsible practice

By collaborating with industry leaders, fostering innovative thinking, and providing tools to assess and improve professional practices, we are helping to transform the culture of the sector. The following highlights illustrate how we are influencing change and shaping a more responsible engineering profession.

# 81%

of people participating in our programmes trust us as a primary source of expertise on globally responsible engineering



## Expanding the Global Responsibility Competency Compass

In 2024, we continued to grow the **Global Responsibility Competency Compass**, designed to empower practitioners with the tools and insights needed to navigate a rapidly changing world.

We expanded the Compass's reach across the sector, introducing it through a **video with the WFEO Academy** and contributing a paper to the **ICE Maritime Engineering collection**, which highlights its potential to shape more responsible practices in coastal and offshore engineering.

The launch of the beta self-assessment tool provided practitioners with a valuable way to identify their strengths and areas for growth. To further support learning, we are working on Version 2 of the Learning Library, offering an enhanced, user-friendly platform to help engineers build knowledge, hone their skills, and adopt globally responsible mindsets.



### Discover the competencies

Our monthly series is unpacking the 12 competencies of globally responsible engineering.



## Spotlight on masculinity in engineering

In October, we spoke to Ed McCann, former President of the Institution of Civil Engineers, and Mark McBride-Wright, Director of EqualEngineers, about how narrow definitions of masculinity are impacting engineering workplace cultures and what we can all do to help dismantle these.

[Explore the article.](#)





## Global design challenges transforming the sector

In 2024 we ran two global virtual design challenges, **Reshaping Engineering** and **Reshaping Transport**, engaging students, educators, and professionals in tackling some of the most pressing issues in engineering and transport.

Through these initiatives, run in partnership with UNESCO, High Volume Transport Applied Research and AzuKo, we foster collaboration and creativity, empowering a diverse range of individuals from around the world to rethink traditional approaches and consider how engineers can help solve systemic challenges.



### Bridging the gender gap

Although women make up just 15.7% of the UK engineering workforce, they account for nearly half of participants in our 'Reshaping' challenges.

96%

of participants in both challenges increased their skills in globally responsible engineering

98%

of participants broadened their mindset about the importance of globally responsible engineering

77.5%

of Reshaping Engineering participants would participate in the challenge again

## Influencing regenerative policy

We're proud to continue supporting Constructivist in delivering the **Regenerative Design Lab**, now in its fourth edition, co-hosted with the Chatham House Sustainability Accelerator.

Building on the success of previous cohorts, our third cohort ran from November 2023 to April 2024, where we explored the intersection of policy and regenerative design. This cohort began to ask: "How can policy unlock the potential of regenerative design?"

The findings and group enquiries from this work are captured in the **Lab 3 report**, which documents our journey and provides insights into advancing regenerative practices through policy.

This latest cohort takes these explorations further, bringing together regenerative practitioners and policy professionals to collaborate on actionable recommendations.

“


"[The Lab was] beyond my imagination... is it too grand to say life-changing? I've been craving a sense of purpose for the next half of my career. My time in the Lab has certainly given me direction and the confidence to develop this further and use my position to influence others."

Participant of the Regenerative Design Lab



# Building a movement

By engaging students, volunteers, partners, and supporters, we are creating a united network of advocates who are committed to shaping the future of the profession. The following highlights illustrate how we are uniting people and organisations worldwide behind our mission.

 **340+**  
people volunteered with us in 2024

## A passionate volunteer community

Our volunteer community plays a crucial role in advancing our mission, offering their time, expertise, and passion to support our design challenges, events, and initiatives.

In 2024, over 200 industry volunteers acted as judges, reviewers, and mentors for our design challenges, providing valuable feedback and guidance to students and professionals working on real-world engineering problems. Their involvement ensures that participants receive constructive insights from experienced professionals, providing inspiration and fostering innovation.

“

“I think every person who’s worked in engineering for a few years should come back and be reminded of that incredible passion that [the students] bring and their determination to solve the problems that we’re facing as a society.”

Hiba Khan, Chartered Civil Engineer at Mott MacDonald and judge at this year’s Engineering for People Grand Finals

## Students making a difference

Our **Student Chapter network** continues to be a powerful force within the Engineers Without Borders movement. This year, Chapters organised a variety of events to engage their communities in hands-on, impactful activities. Highlights include EWB Glasgow, Strathclyde, Heriot-Watt and Lancaster’s joint designathon focussed on ‘Sustainable Cities’, as well as City St George’s Robotics Hack-A-Health, which explored the intersection of technology and health.

Alongside this, Student Champion, Kayley Thacker, took the stage at our Systems Change Lab, delivering a powerful keynote on the need for systemic change in engineering curricula.

Our Student Chapters also came together for our annual **Building Community Leaders event**, where they set a shared vision for the year ahead. This event strengthens the bond between Chapters, enabling students to collaborate across institutions and to inspire each other.



“

“People join for the projects but stay for the community.”

Student Chapter member attending Building Community Leaders 2024

 **24**

Student Chapters have led change in the UK in 2024, supported by 13 Student Champions.



## Collaborating with our international colleagues

2024 has been a critical year for the global Engineers Without Borders movement, as we work to amplify our collective impact.

Reinvigorating international collaboration, we joined the European Summit in May, bringing together regional Engineers Without Borders chapters to align on shared goals and strategies. This was followed by a Global Summit in November, where 23 Engineers Without Borders organisations from across the world united to chart the course for collective action on a global scale.

We are continuing to work with the international movement through working groups focussed on important areas for change.

“

We are walking away [from the Global Summit] with a deep commitment in our hearts. It's something really meaningful - a commitment to the global Engineers Without Borders movement and the world outside of our doors.”

Katie Cresswell-Maynard, Executive Director of Engineers Without Borders International

## Supporting our staff team

We are committed to fostering a dynamic, supportive, and collaborative environment in all areas of our work, including our staff team.

In 2024 we have grown our team, with seven talented new hires bringing fresh perspectives, skills, and energy to our work. We are also proud to have been Highly Commended for Progressive Working Practices at the eni Inclusivity Excellence Awards, a recognition of our ongoing efforts to prioritise the well-being and professional growth of our team.

We've continued to deliver monthly team days - an opportunity to connect, reflect, and align on our shared goals. We've also partnered with Beth Goddard at Firefly Future, a team coach who helps us build trust, navigate challenges, and strengthen our ability to work as a cohesive unit.

The result? Regular team surveys show that our staff feel happy and well-supported in their day-to-day work, with a strong sense of camaraderie that underpins everything we do. We're proud of the culture we're building together and are excited to continue growing as a team.



# Looking ahead to 2025

As we step into 2025, we are excited to build on our momentum with bold new initiatives.

We are developing three key projects designed to propel our mission forward by upskilling and mobilising a diverse community of individuals at various stages of their careers to drive meaningful change in globally responsible engineering.

These initiatives will focus on helping participants develop their capabilities, make a tangible impact, and benefit from the support of a wider network. We invite our network to join us in **upcoming sessions to test and refine these proposals**, ensuring they have the greatest impact.

Alongside these initiatives, we will continue to expand our programmes and grow our movement, engaging even more people in creating a safe and just future through engineering.

**Together, we are transforming the culture of engineering.**



## With thanks to our

### Supporters

Our supporters are the driving force behind our mission. From attending events and engaging with discussions, to advocating for our cause and sharing our journey, their passion and commitment amplify our message and inspire others to join the movement.

### Volunteers

Every year hundreds of volunteers **provide crucial support** to our programmes - reviewing and judging design ideas, supporting our events, and mentoring the next generation of engineers. Without these people, our programmes could not go ahead.

### Students

Our organisation was founded by students. Today, our **student network** continues to play an integral role in our movement by leading extracurricular activities, advocating for our work and helping to shape the trajectory of the movement.

### Collaborators

Collaboration is at the heart of what we do. By partnering with community organisations who generously share their stories with us, and working with individuals and organisations who help shape our work, we create meaningful impact.

### Partners

Through **strategic partnerships** with organisations that share our vision, we are driving lasting change. Our partners provide invaluable support and sponsorship, enabling us to grow our programmes and expand our reach.



Join the  
movement.



UK

ENGINEERS  
WITHOUT BORDERS

Working to put global  
responsibility at the  
heart of engineering.

[www.ewb-uk.org](http://www.ewb-uk.org)

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